

Listing of Claims

This listing of claims replaces all prior versions, and listings, of claims in the application:

1-9. (Canceled)

10. (Previously Presented) A lithography system, comprising:

a polarization modulator configured to change light which is applied thereto from a first polarization profile to a second polarization profile different than the first polarization profile; and

a stress modulator in communication with the polarization modulator, the stress modulator to apply stress to the polarization modulator, wherein the stress modulator is configured to apply stress to an outer surface of the polarization modulator to obtain a polarization profile at an imaging plane wherein the polarization profile exhibits substantially azimuthal symmetry.

11. (Canceled)

12. (Previously Presented) A lithography system,
comprising:

a polarization modulator configured to change light which
is applied thereto from a first polarization profile to a second
polarization profile different than the first polarization
profile; and

a stress modulator in communication with the polarization
modulator, the stress modulator to apply stress to the
polarization modulator, wherein the lithography system comprises
an immersion lithography system.

13. (Canceled)

14. (Previously Presented) A lithography system,
comprising:

a polarization modulator configured to change light which
is applied thereto from a first polarization profile to a second
polarization profile different than the first polarization
profile; and

a stress modulator in communication with the polarization
modulator, the stress modulator to apply stress to the
polarization modulator, wherein the stress modulator is
configured to apply stress using expansion.

15. (Previously Presented) A lithography system,
comprising:

a polarization modulator configured to change light which
is applied thereto from a first polarization profile to a second
polarization profile different than the first polarization
profile; and

a stress modulator in communication with the polarization
modulator, the stress modulator to apply stress to the
polarization modulator, wherein the stress modulator is
configured to apply stress by heating at least one of the stress
modulator and the polarization modulator.

16. (Previously Presented) A lithography system,
comprising:

a polarization modulator configured to change light which
is applied thereto from a first polarization profile to a second
polarization profile different than the first polarization
profile; and

a stress modulator in communication with the polarization
modulator, the stress modulator to apply stress to the
polarization modulator, wherein the stress modulator is
configured to apply stress by cooling at least one of the stress
modulator and the polarization modulator.

17. (Previously Presented) A lithography system,
comprising:

a polarization modulator configured to change light which
is applied thereto from a first polarization profile to a second
polarization profile different than the first polarization
profile; and

a stress modulator in communication with the polarization
modulator, the stress modulator to apply stress to the
polarization modulator, further comprising:

another polarization modulator positioned to receive light
having a received polarization profile and to transmit light
having a different transmitted polarization profile; and

another stress modulator in communication with the another
polarization modulator, the another stress modulator to apply
stress to the another polarization modulator.

18-23. (Canceled)

24. (Currently Amended) A method of modifying the
polarization of light, comprising:

applying stress to a polarization modulator;

receiving light of a first polarization state in the
polarization modulator;

modifying the polarization of light within the polarization modulator; ~~and~~

detecting a parameter related to one or more characteristics of the light; and

transmitting light of a second polarization state different than the first polarization state from the polarization modulator, wherein the parameter is related to the second polarization state.

25. (Previously Presented) A method of modifying the polarization of light, comprising:

applying stress to a polarization modulator;

receiving light of a first polarization state in the polarization modulator;

modifying the polarization of light within the polarization modulator;

transmitting light of a second polarization state different than the first polarization state from the polarization modulator wherein the parameter is related to the second polarization state;

detecting a parameter related to one or more characteristics of the light; and

forming a pattern on a substrate using the transmitted light, and wherein the parameter is a parameter based on the pattern.

26-28. (Canceled)

29. (Previously Presented) A polarization control apparatus, comprising:

a polarization modulator configured to change light which is applied thereto from a first polarization profile to a second polarization profile different than the first polarization profile;

a stress modulator in communication with the polarization modulator, the stress modulator to apply stress to the polarization modulator;

a controller configured to receive a signal based on a parameter related to one or more characteristics of the transmitted light, the controller in communication with the stress modulator and configured to control the stress; and

a light sensor positioned to receive at least a portion of the transmitted light, the light sensor in communication with the controller wherein the signal based on the parameter is a signal from the light sensor;

wherein the parameter is based on the second different polarization profile.

30. (Currently Amended) A polarization control apparatus, comprising:

a polarization modulator configured to change light which is applied thereto from a first polarization profile to a second polarization profile different than the first polarization profile;

a stress modulator in communication with the polarization modulator, the stress modulator to apply stress to the polarization modulator;

a controller configured to receive a signal based on a parameter related to one or more characteristics of the transmitted light, the controller in communication with the stress modulator and configured to control the stress;

~~a light sensor positioned to receive at least a portion of the transmitted light, the light sensor in communication with the controller, and~~

~~wherein the signal based on the parameter is a signal from the light sensor further comprising~~ a substrate including a pattern formed using the transmitted light, and

wherein the parameter is based on the pattern.